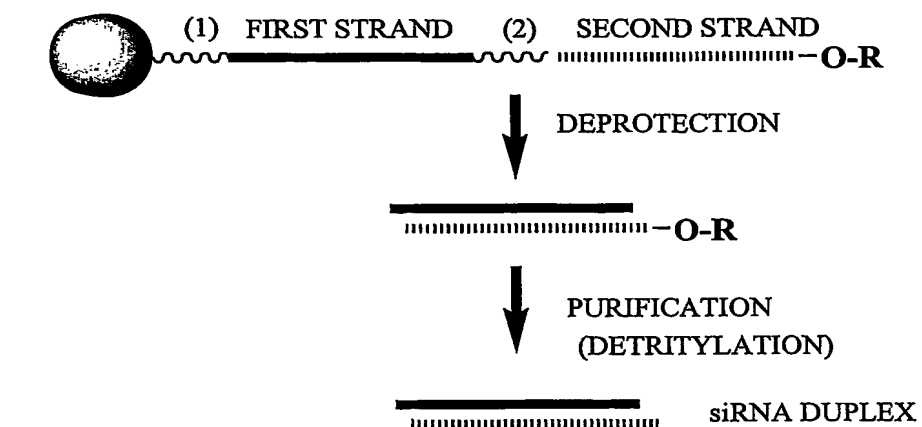


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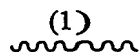
*Figure 1*

= SOLID SUPPORT

**R** = TERMINAL PROTECTING GROUP

FOR EXAMPLE:

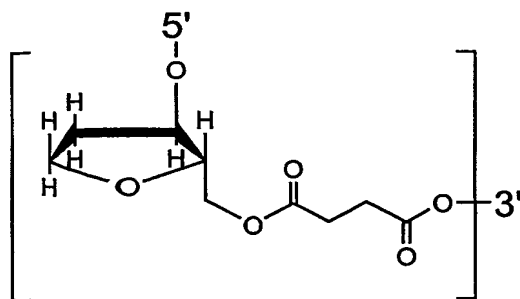
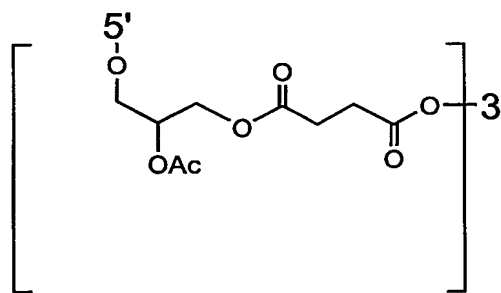
DIMETHOXYTRITYL (DMT)



= CLEAVABLE LINKER

(FOR EXAMPLE: NUCLEOTIDE SUCCINATE OR  
INVERTED DEOXYABASIC SUCCINATE)

= CLEAVABLE LINKER

(FOR EXAMPLE: NUCLEOTIDE SUCCINATE OR  
INVERTED DEOXYABASIC SUCCINATE)INVERTED DEOXYABASIC SUCCINATE  
LINKAGE

GLYCERYL SUCCINATE LINKAGE

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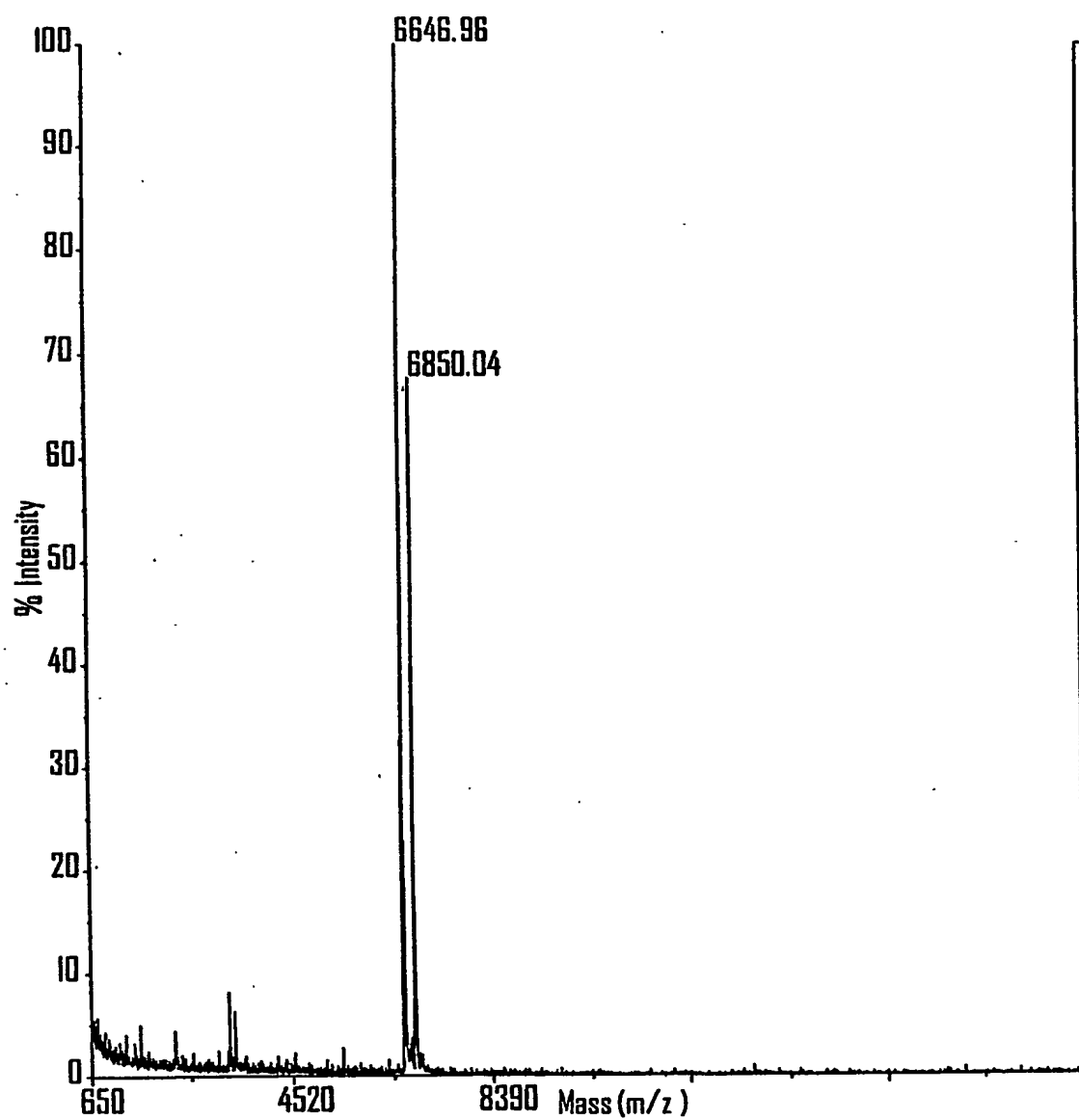
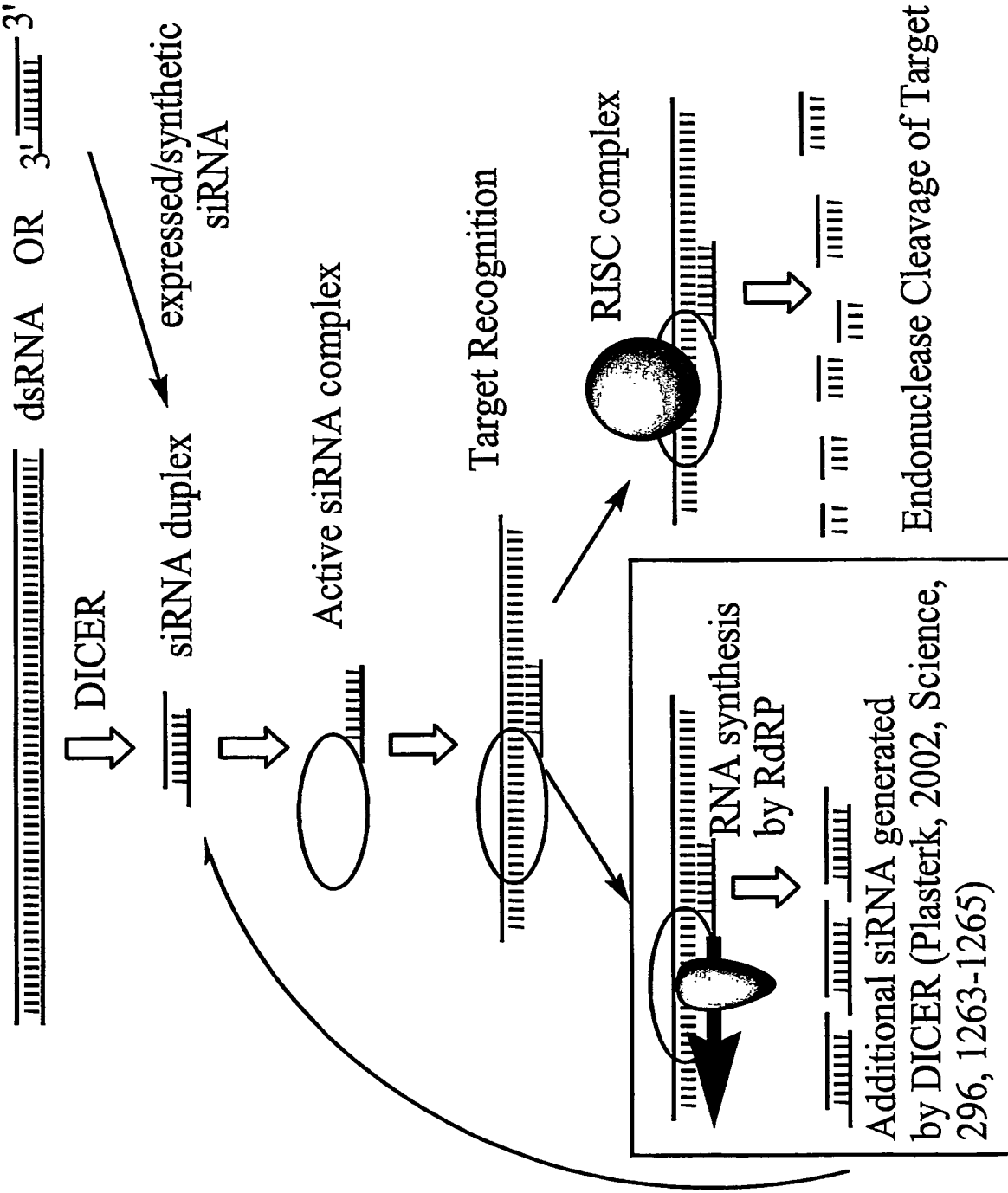
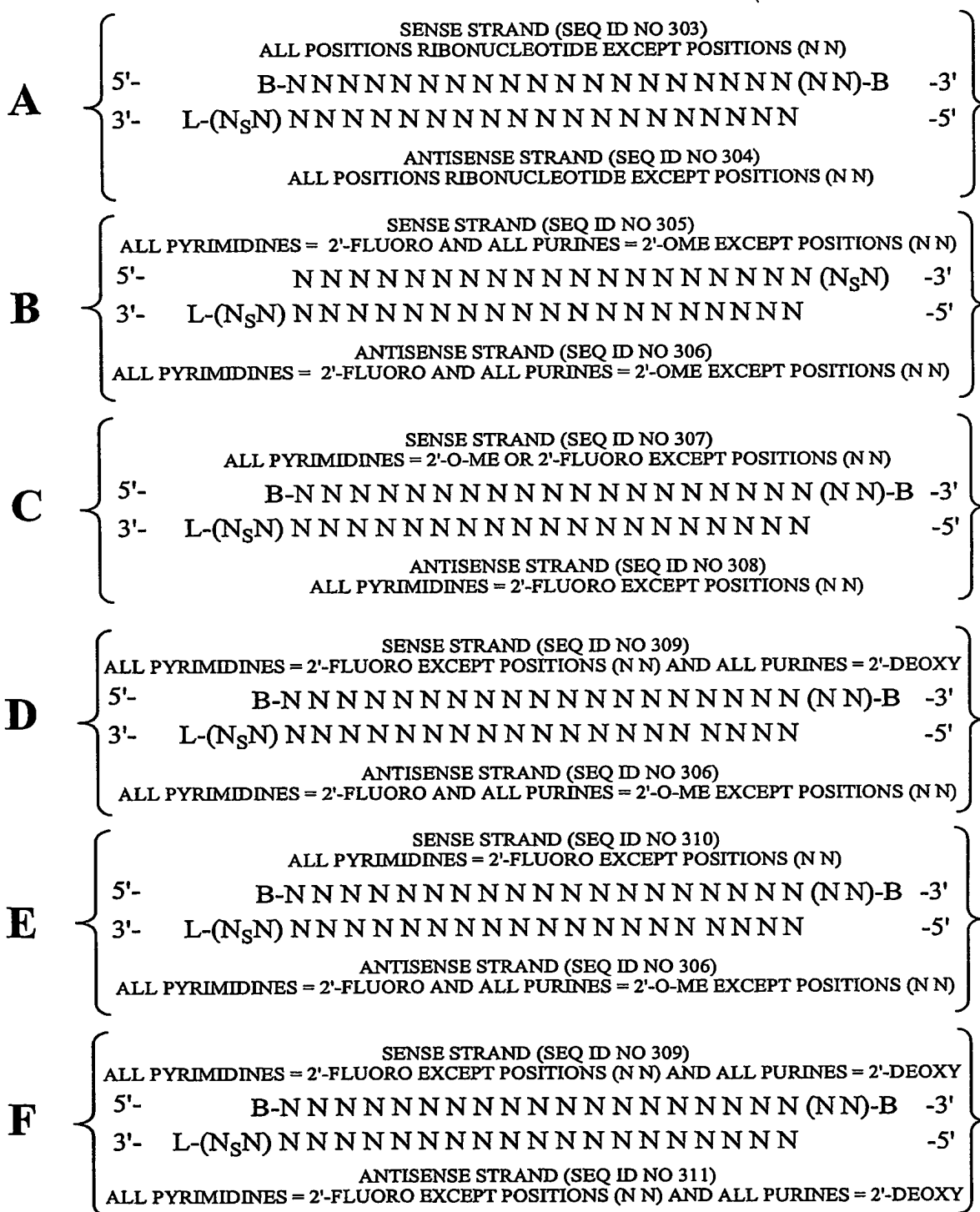
*Figure 2*

Figure 3

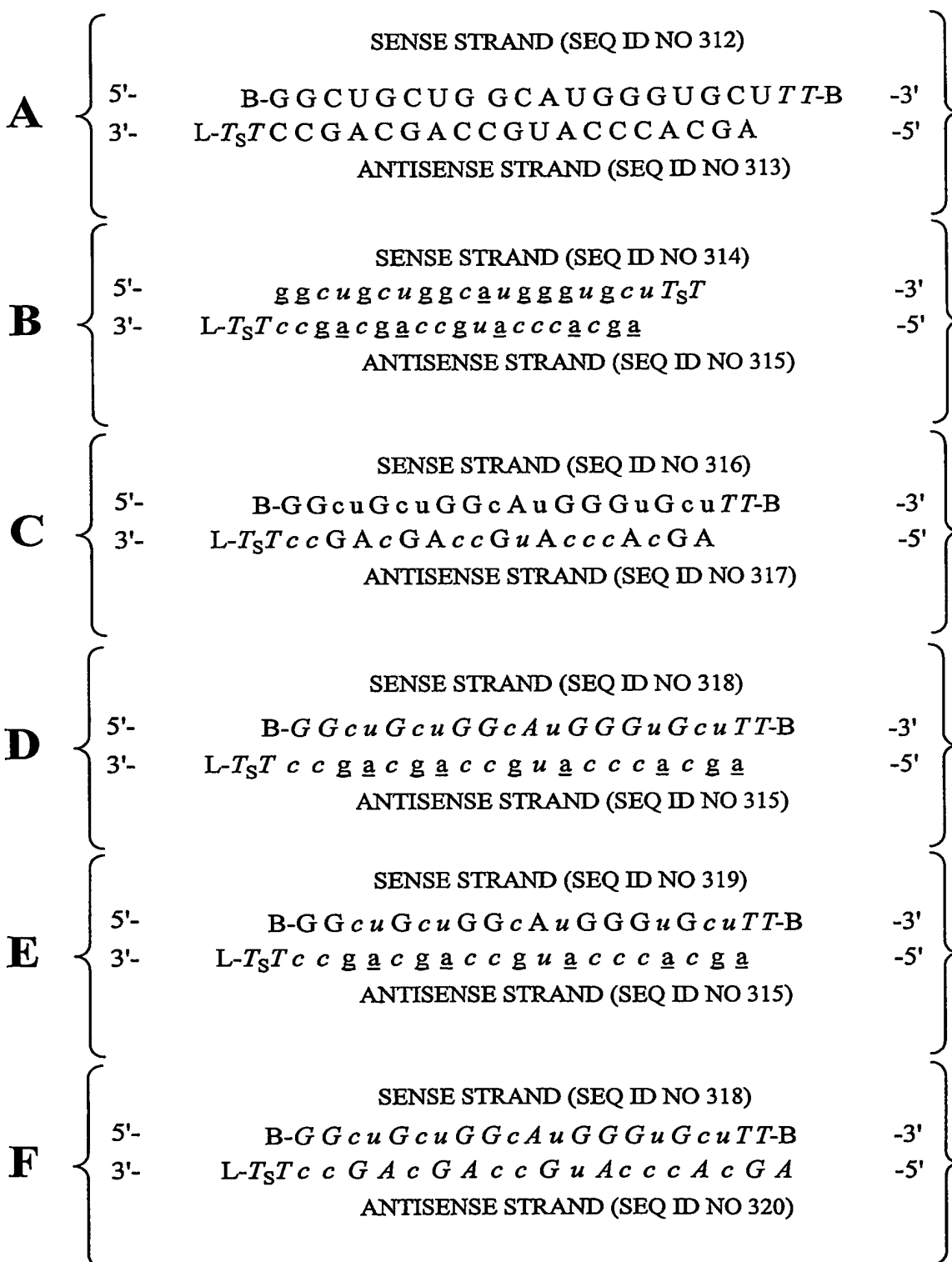


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**Figure 4**

POSITIONS (NN) CAN COMPRISE ANY NUCLEOTIDE, SUCH AS DEOXYNUCLEOTIDES (eg. THYMIDINE) OR UNIVERSAL BASES  
 B = ABASIC, INVERTED ABASIC, INVERTED NUCLEOTIDE OR OTHER TERMINAL CAP THAT IS OPTIONALLY PRESENT  
 L = GLYCERYL MOIETY THAT IS OPTIONALLY PRESENT  
 S = PHOSPHOROTHIOATE OR PHOSPHORODITHIOATE THAT IS OPTIONALLY PRESENT

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**Figure 5**

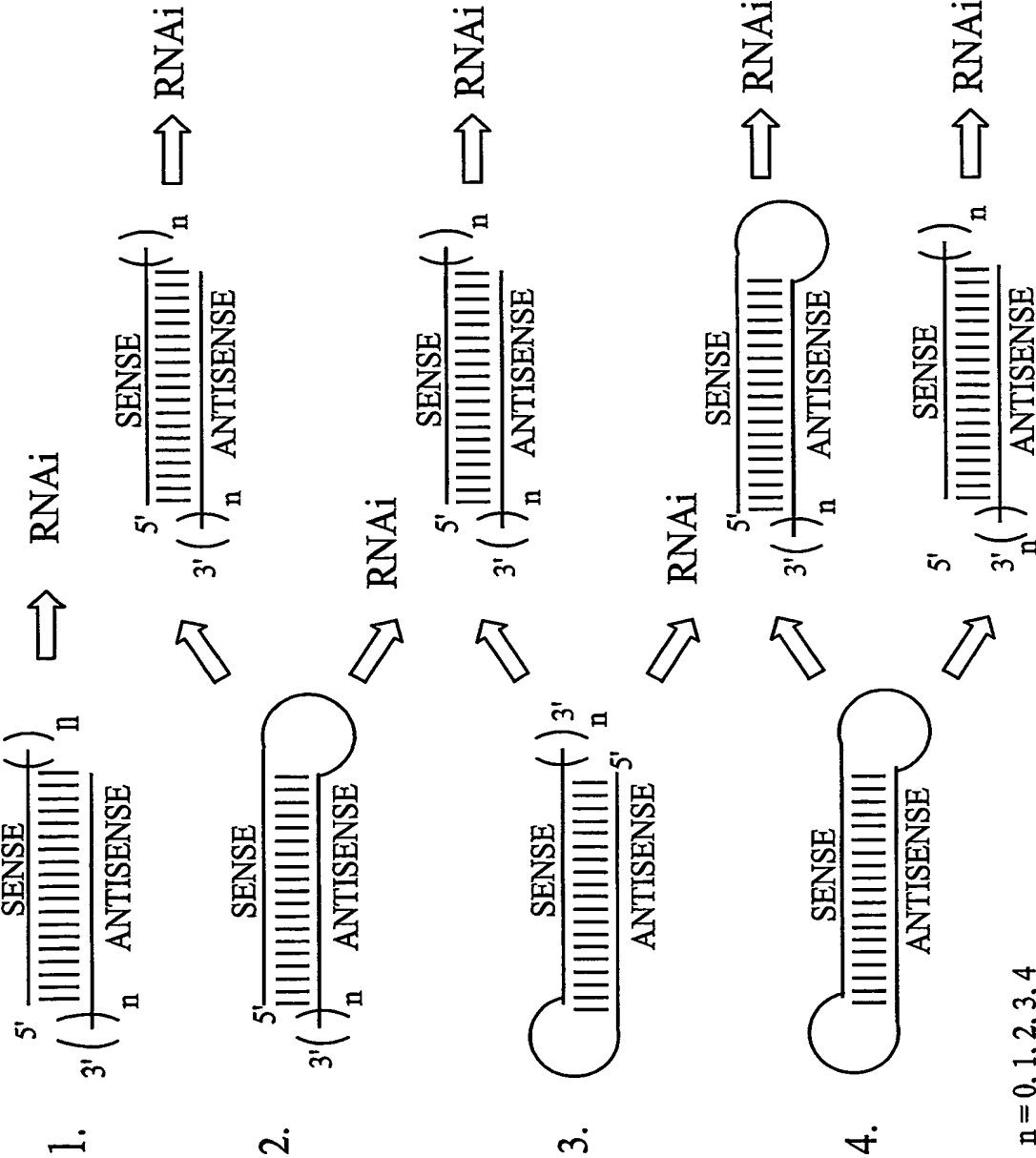
lower case = 2'-O-Methyl or 2'-deoxy-2'-fluoro

*italic lower case* = 2'-deoxy-2'-fluorounderline = 2'-O-methyl*ITALIC UPPER CASE* = DEOXY

L = GLYCERYL MOIETY, OR B, OPTIONALLY PRESENT

B = ABASIC, INVERTED ABASIC, INVERTED  
NUCLEOTIDE OR OTHER TERMINAL CAP  
THAT IS OPTIONALLY PRESENTS = PHOSPHOROTHIOATE OR  
PHOSPHORODITHIOATE OPTIONALLY PRESENT

Figure 6



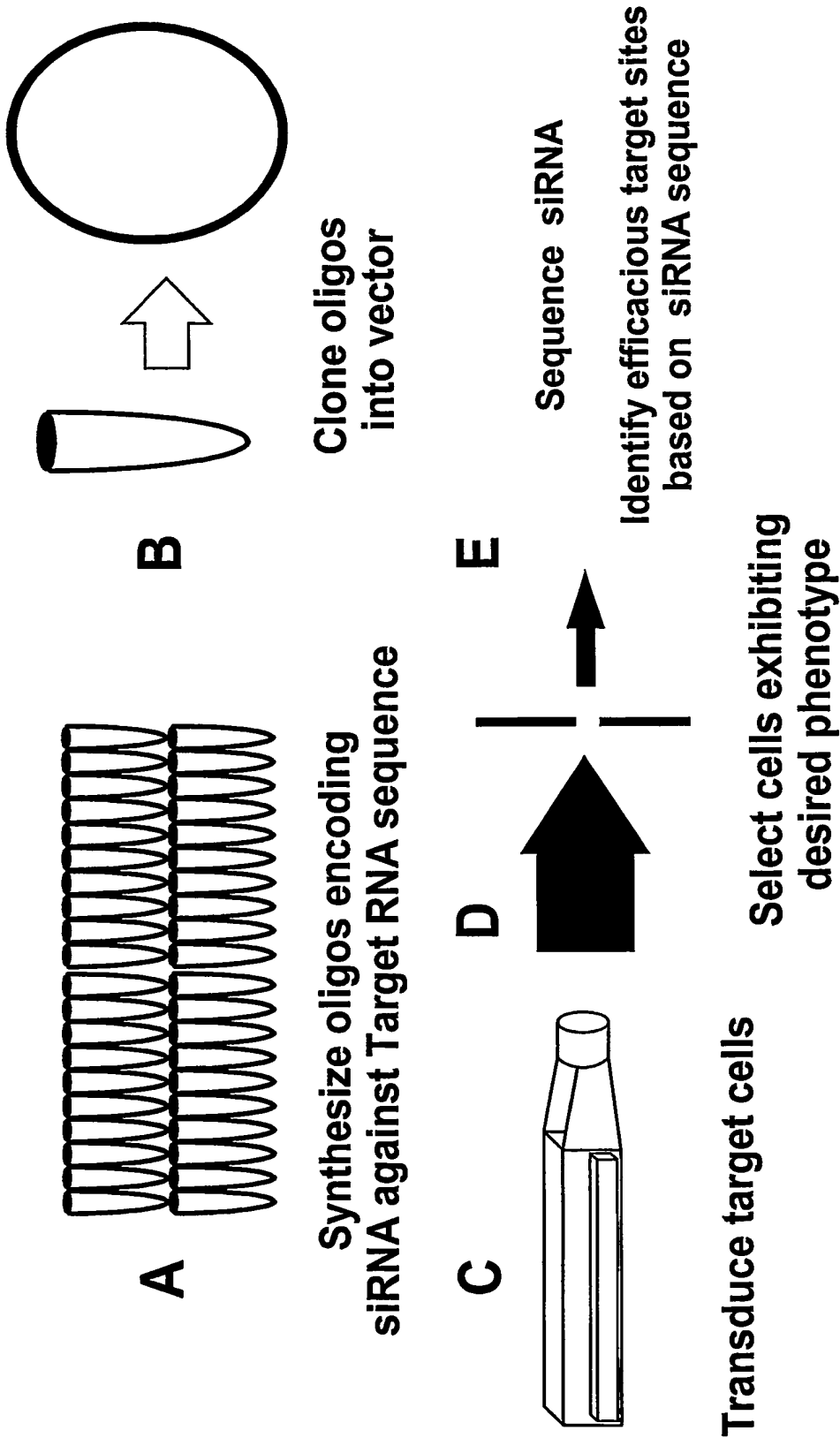




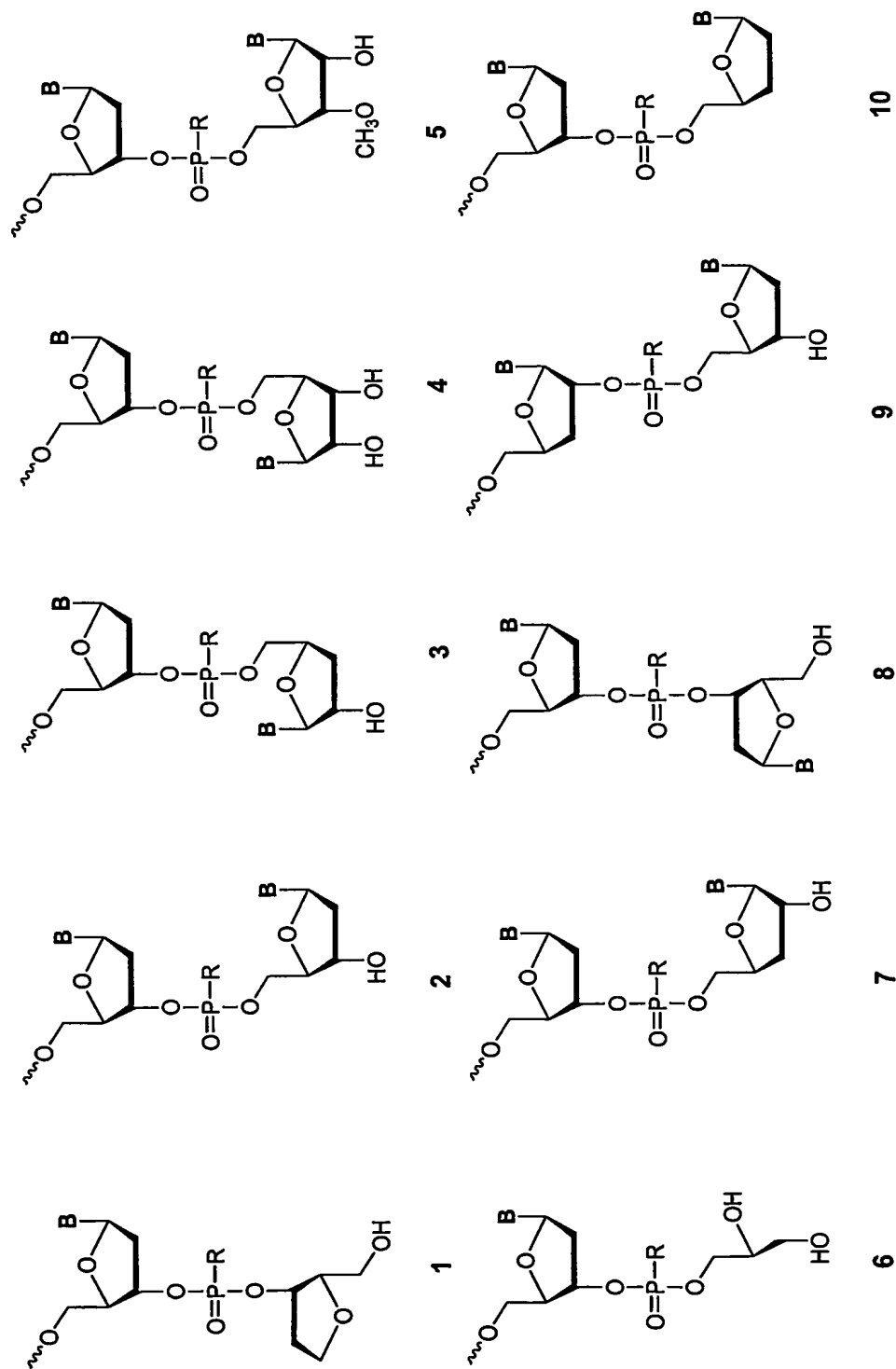


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Figure 9: Target site Selection using siRNA

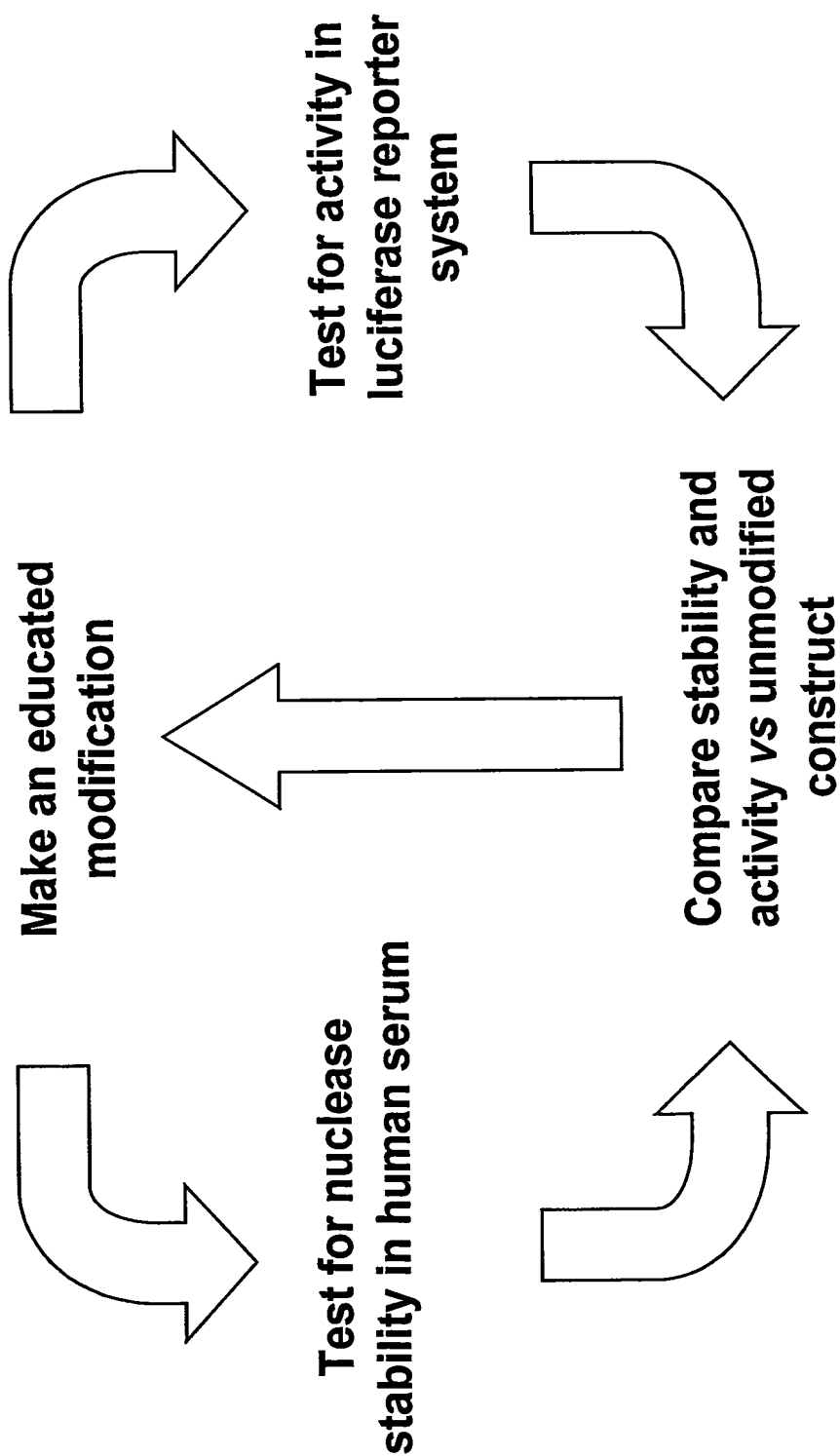


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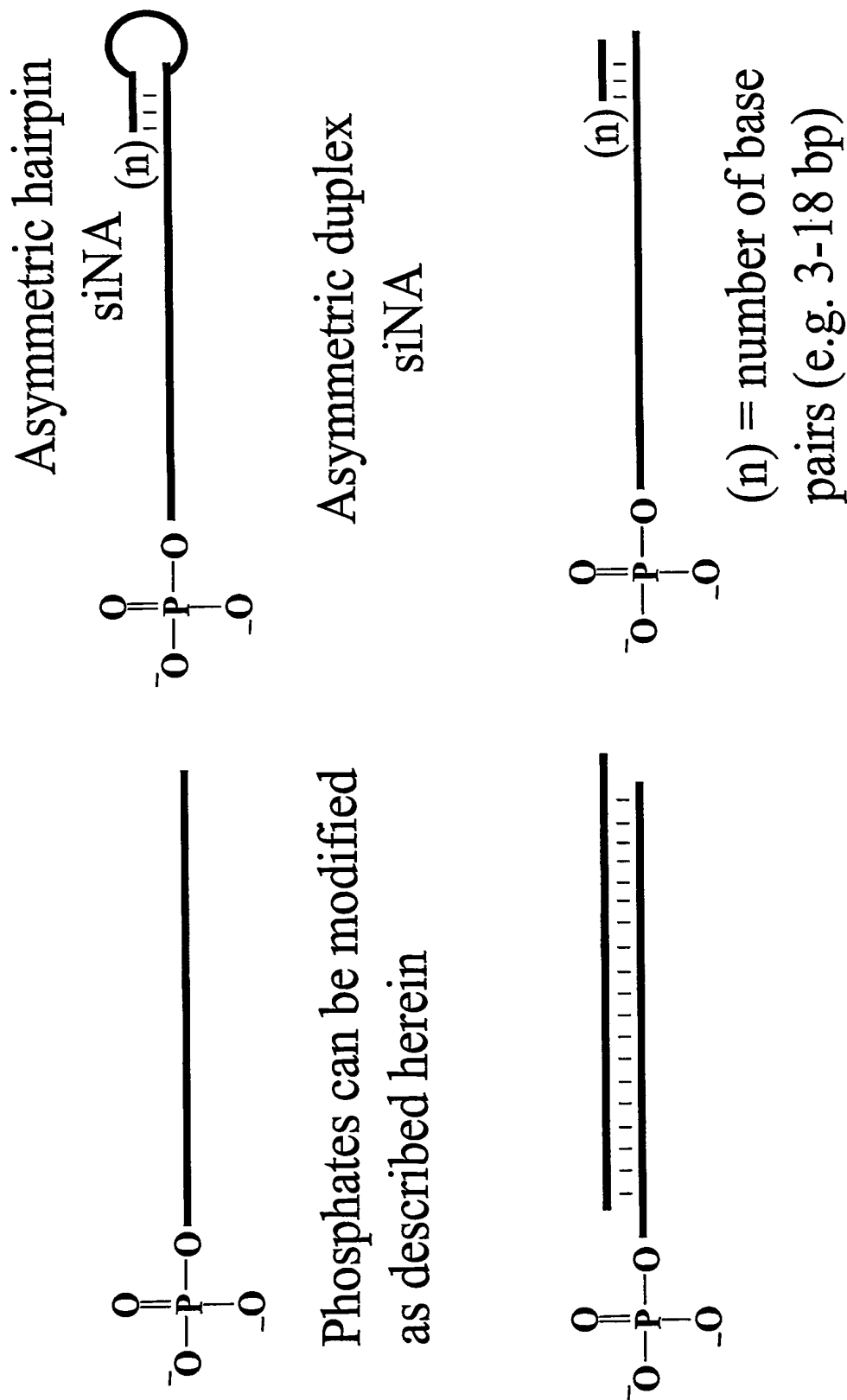
*Figure 10*

R = O, S, N, alkyl, substituted alkyl, O-alkyl, S-alkyl, alkaryl, or aralkyl  
B = Independently any nucleotide base, either naturally occurring or chemically modified, or optionally H (abasic).

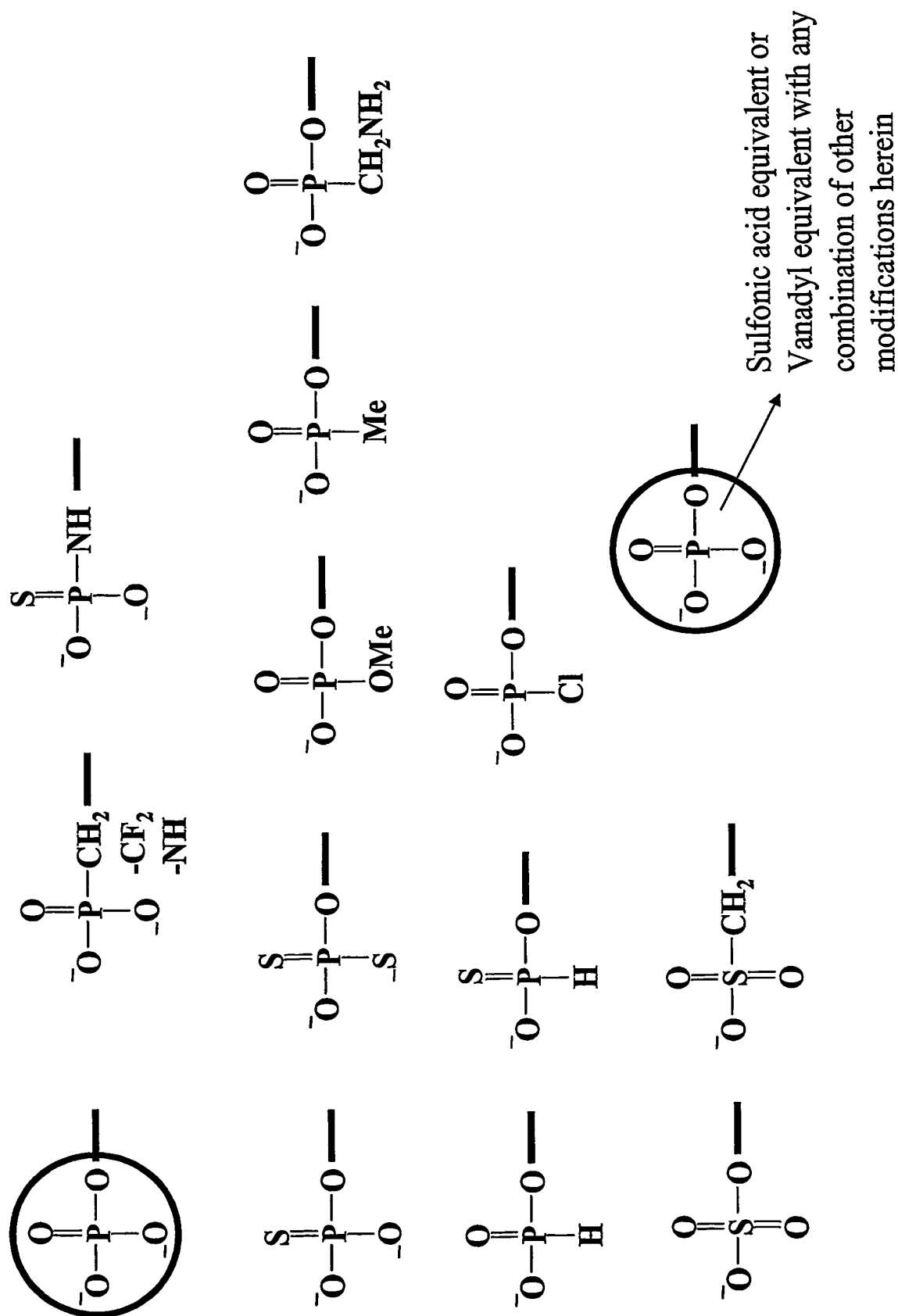
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**Figure 11: Modification Strategy**

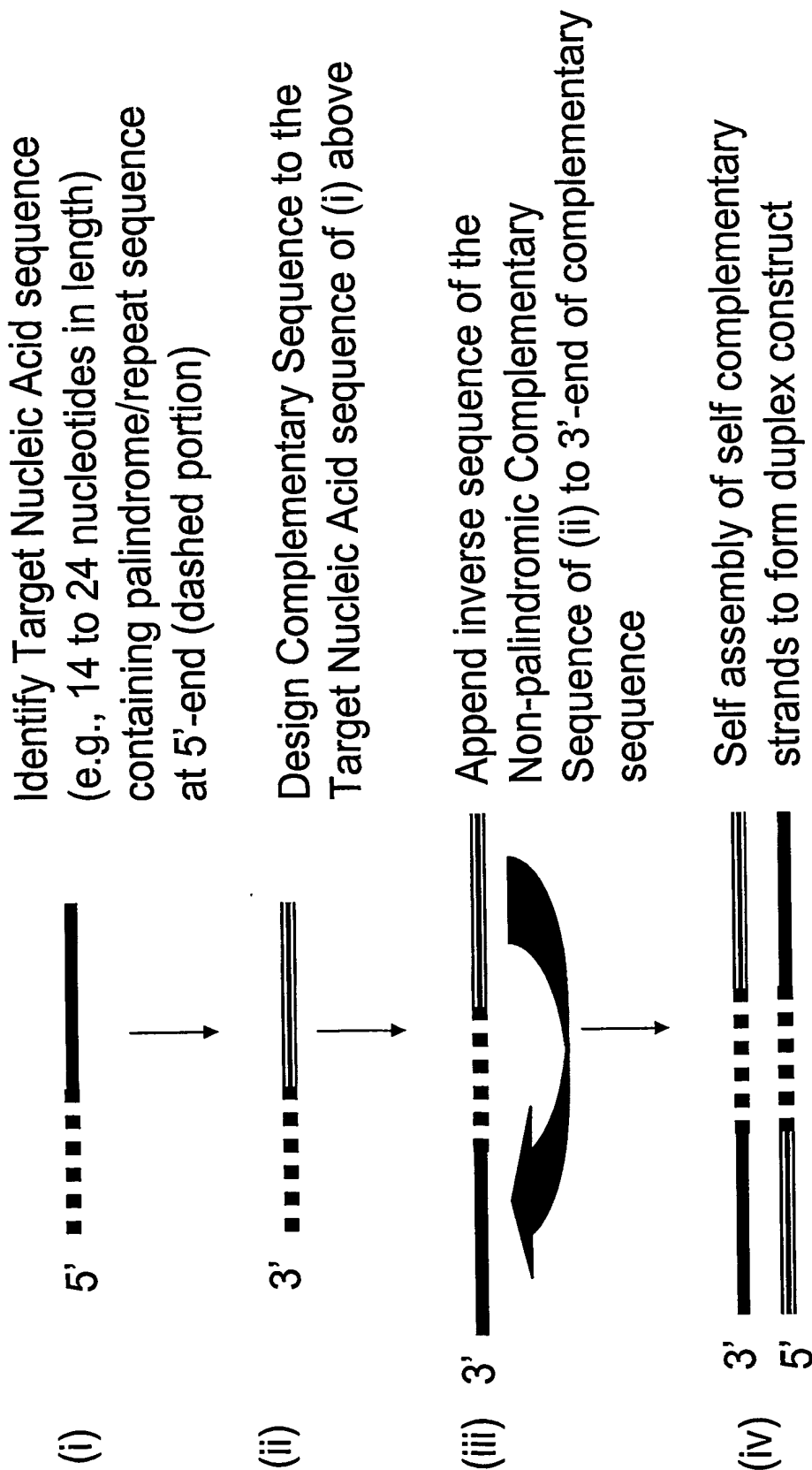
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*Figure 12: Phosphorylated siNA constructs*

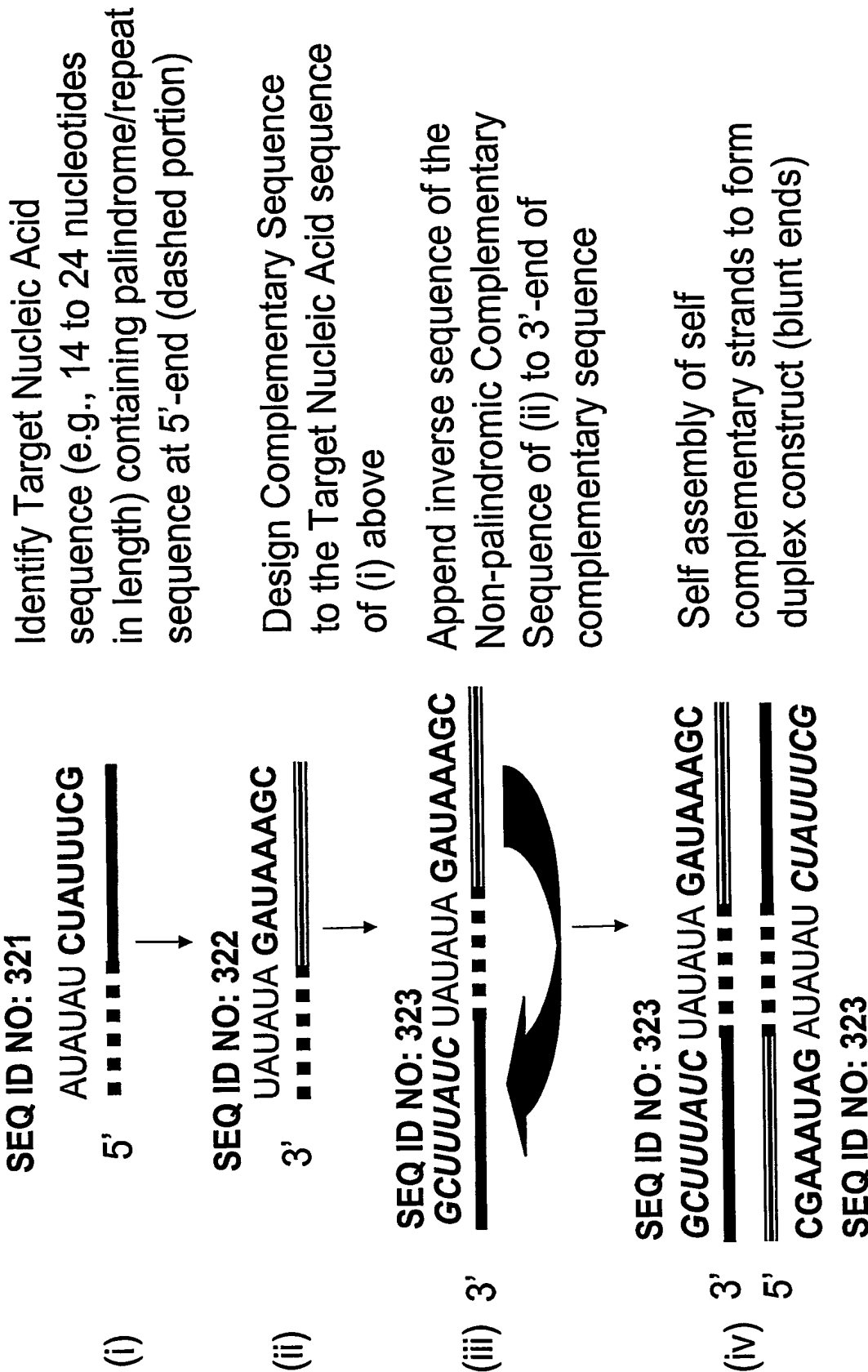
*Figure 13: 5'-phosphate modifications*

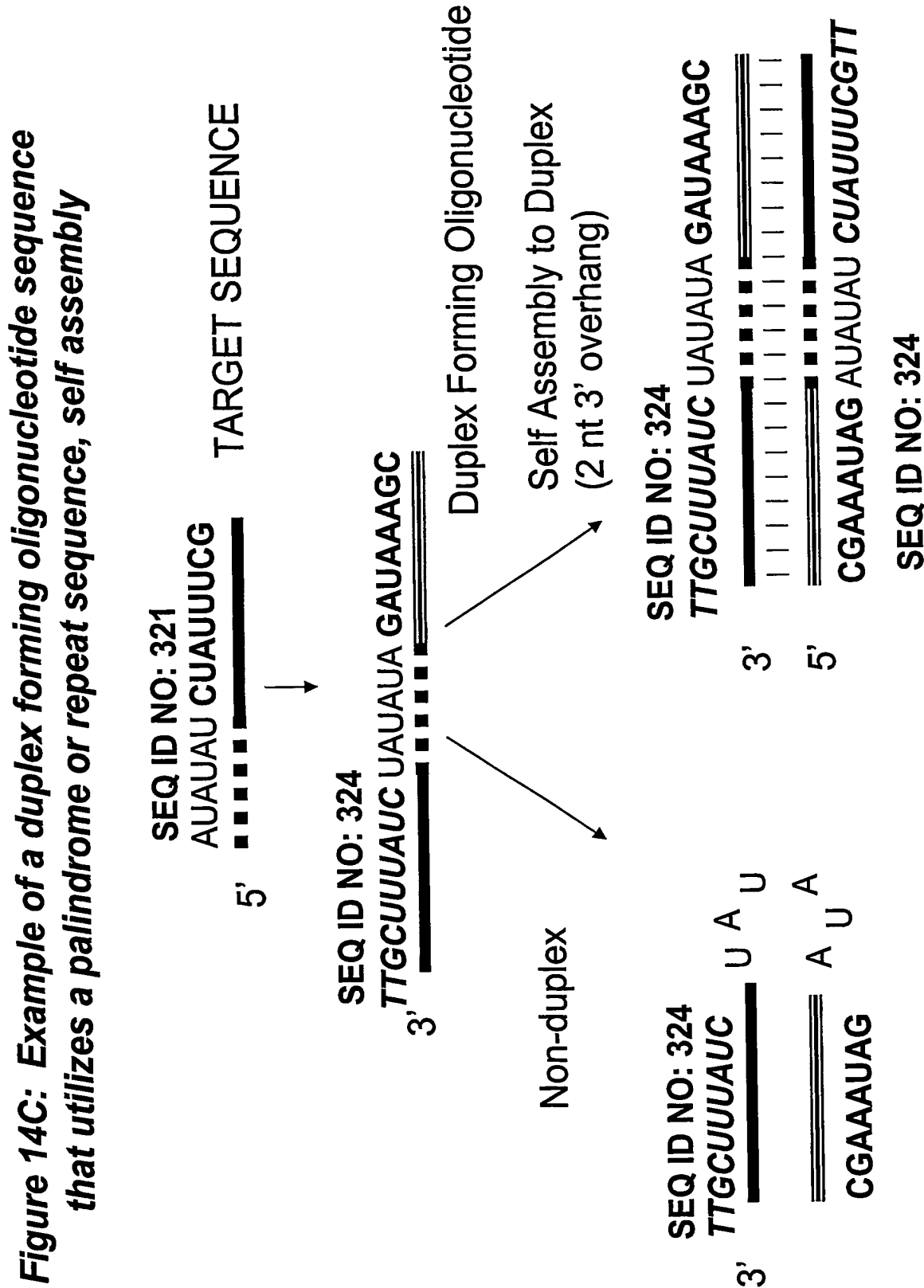


**Figure 14A: Duplex forming oligonucleotide constructs that utilize  
Palindrome or repeat sequences**



**Figure 14B: Example of a duplex forming oligonucleotide sequence that utilizes a palindrome or repeat sequence**



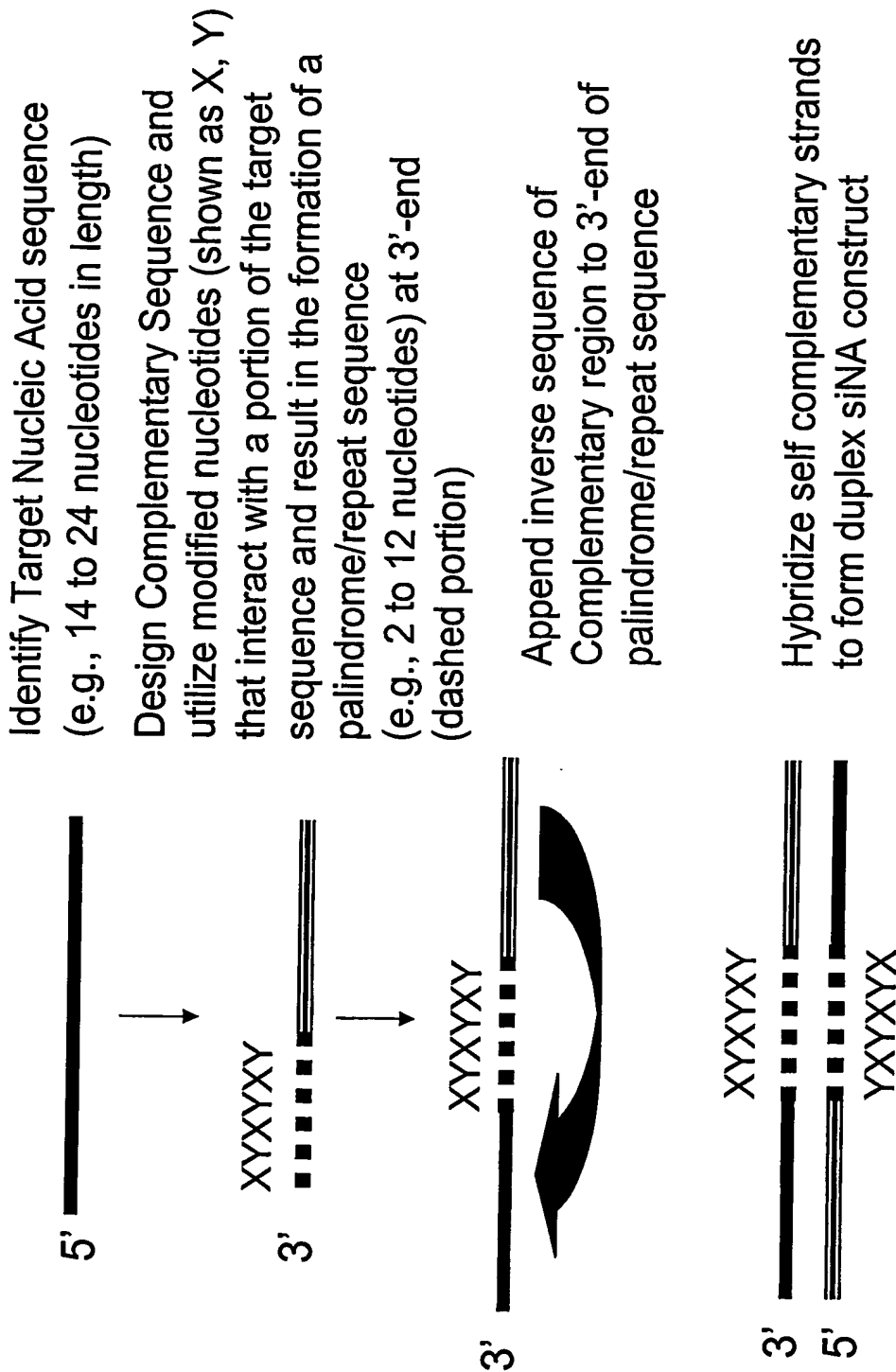




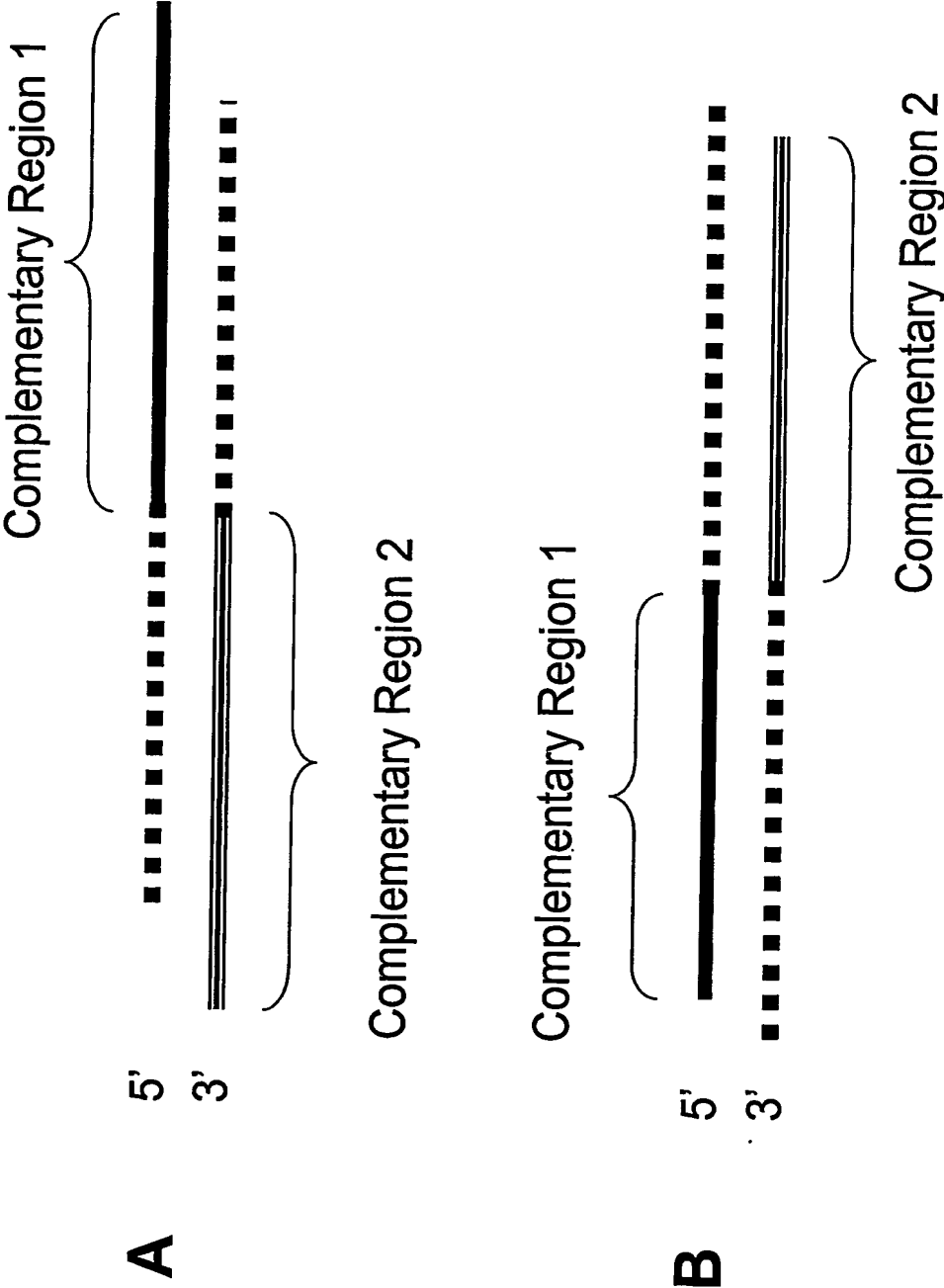
**Figure 14D: Example of a duplex forming oligonucleotide sequence that utilizes a palindrome or repeat sequence, self assembly and inhibition of Target Sequence Expression**



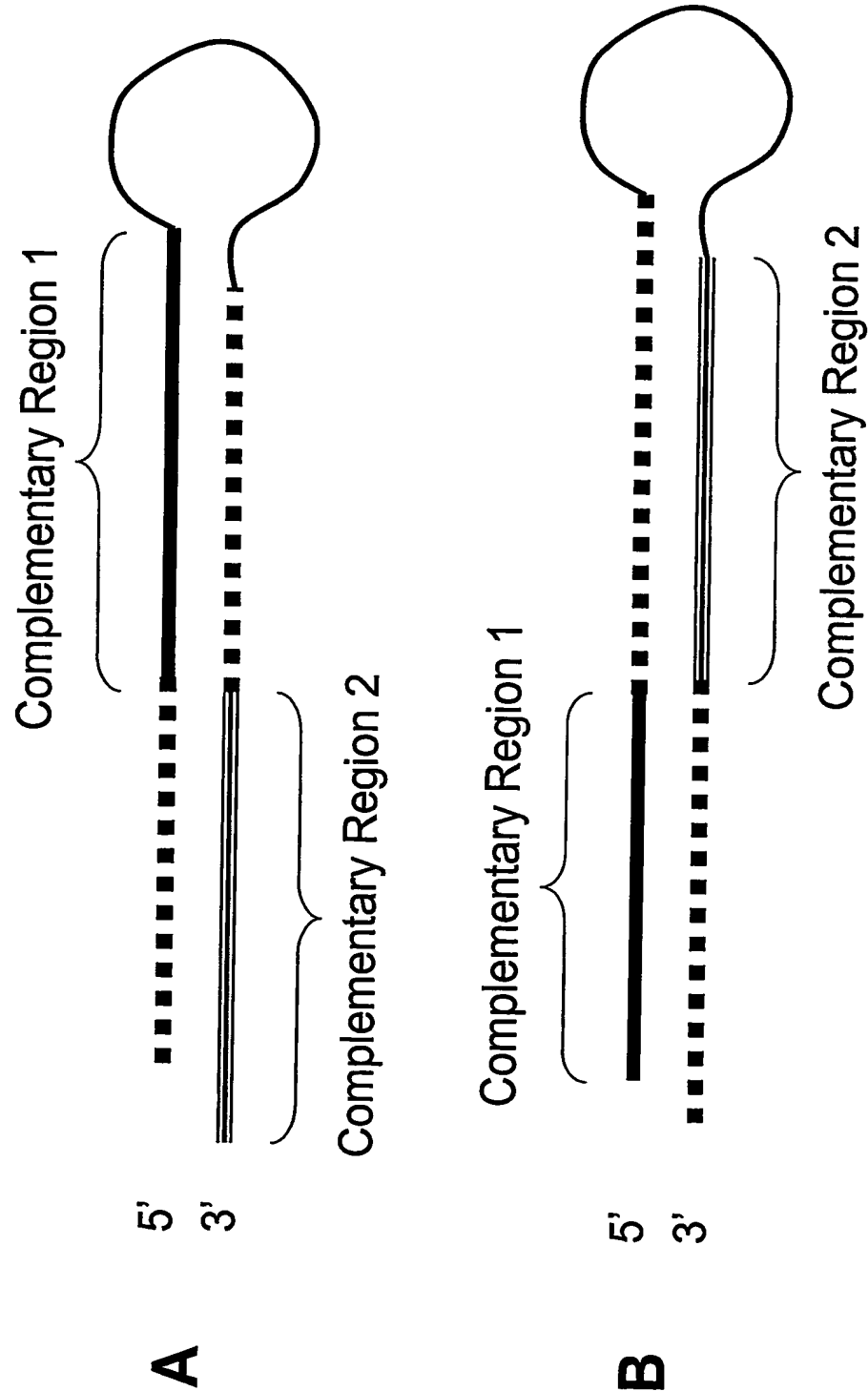
**Figure 15: Duplex forming oligonucleotide constructs that utilize artificial palindrome or repeat sequences**



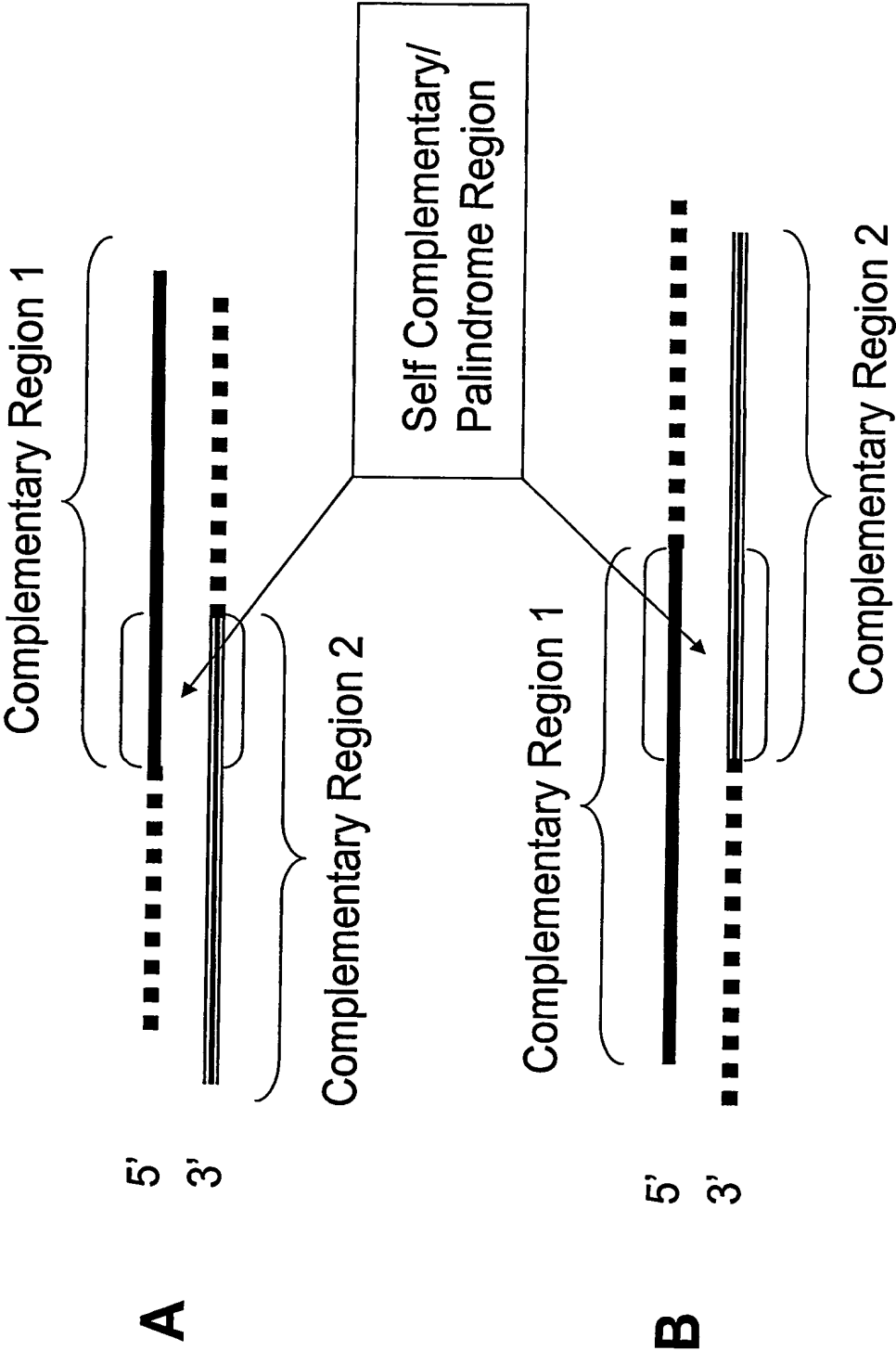
**Figure 16: Examples of double stranded multifunctional siNA constructs with distinct complementary regions**



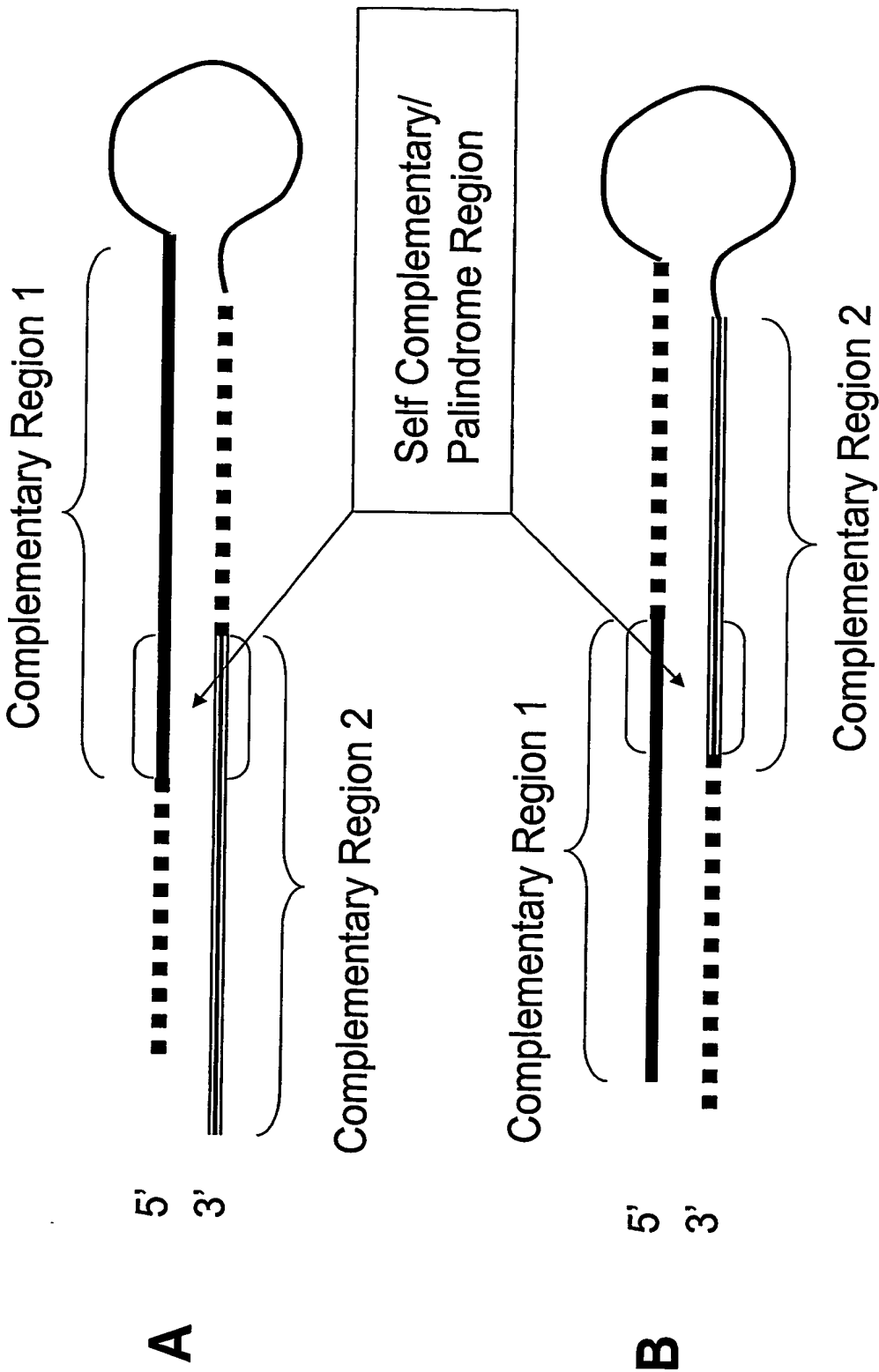
**Figure 17: Examples of hairpin multifunctional siNA constructs with distinct complementary regions**



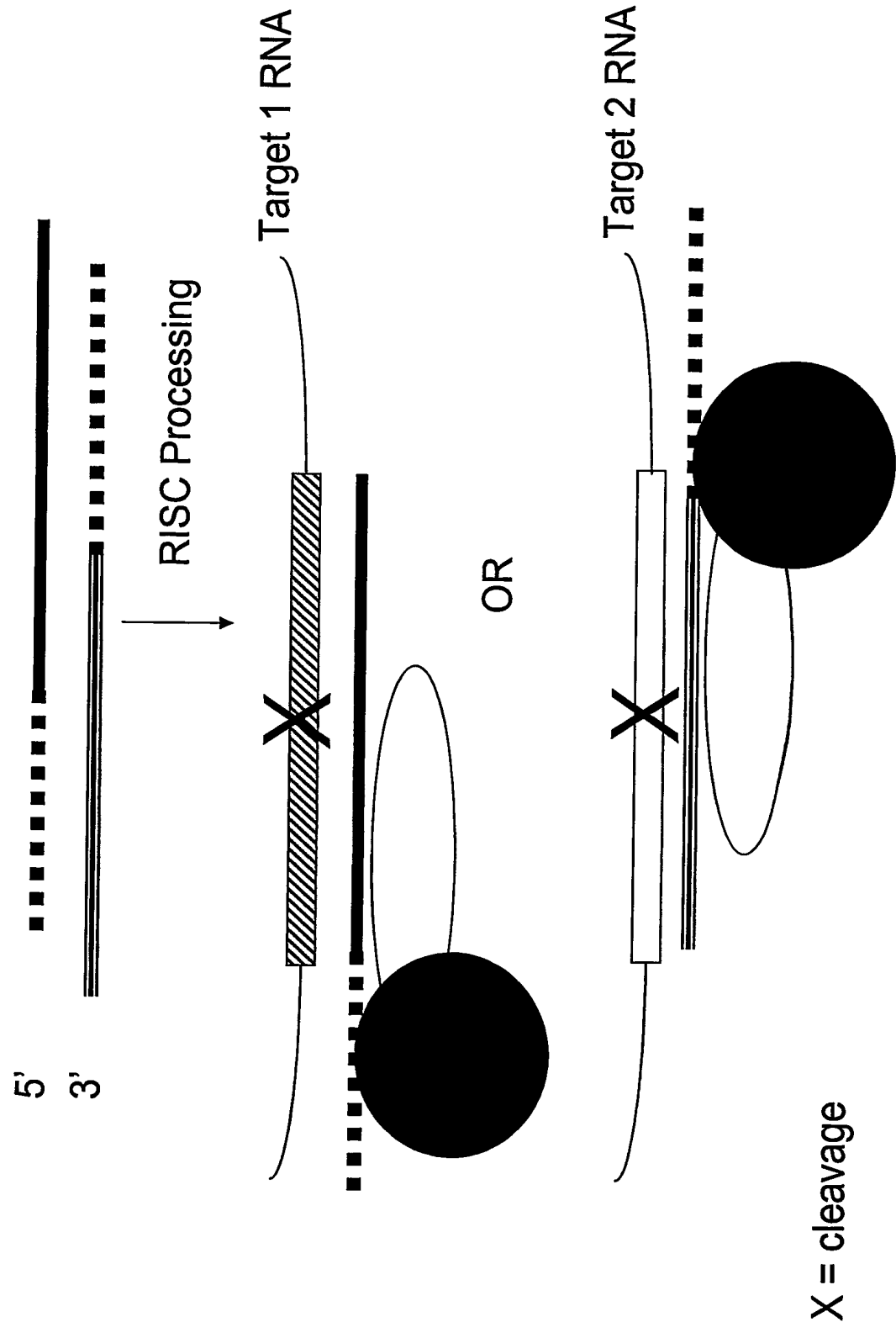
**Figure 18: Examples of double stranded multifunctional siNA constructs with distinct complementary regions and a self complementary/palindrome region**



**Figure 19: Examples of hairpin multifunctional siNA constructs with distinct complementary regions and a self complementary/palindrome region**



**Figure 20: Example of multifunctional siNA targeting two  
Separate Target nucleic acid sequences**



**Figure 21: Example of multifunctional siNA targeting two regions within the same target nucleic acid sequence**

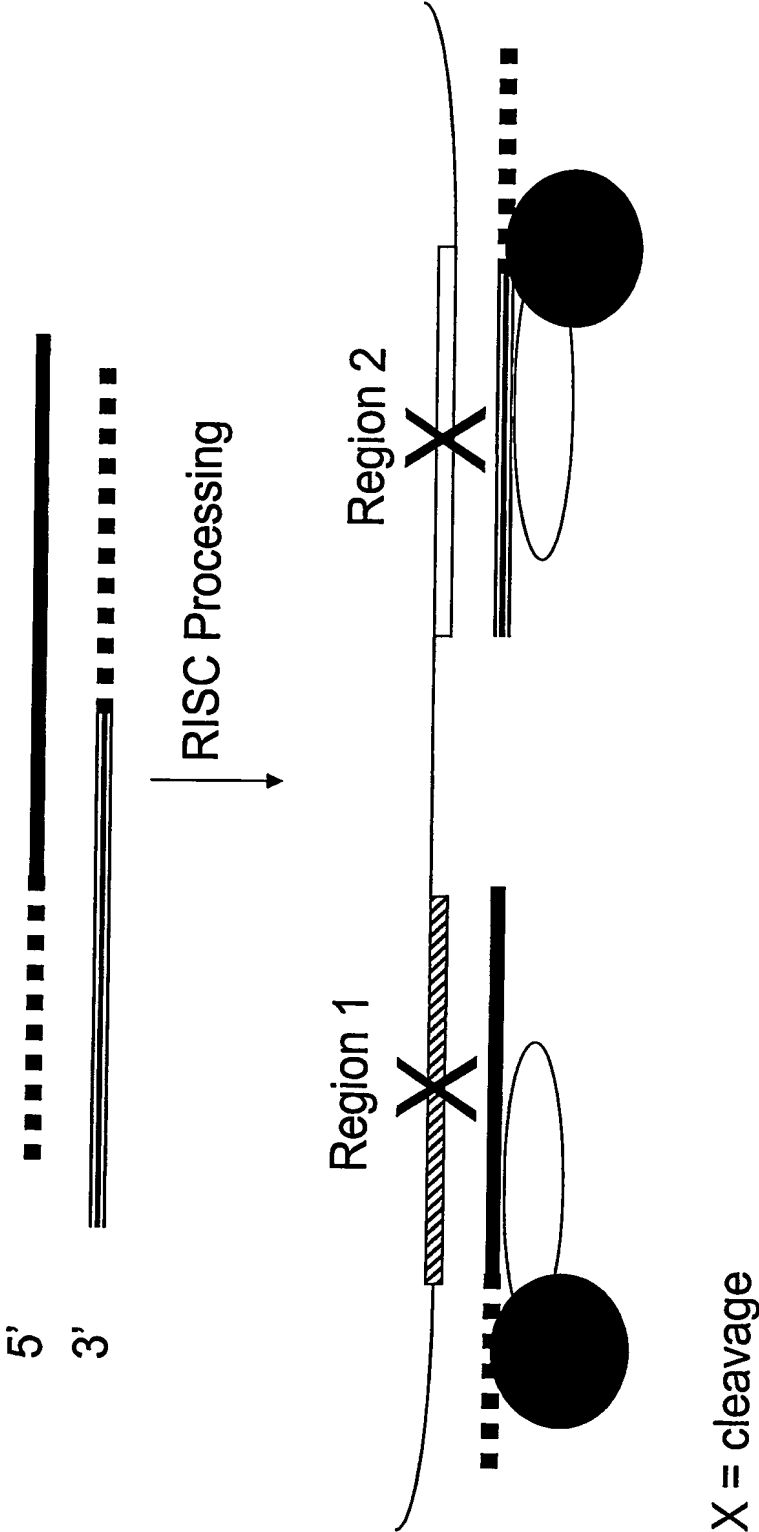
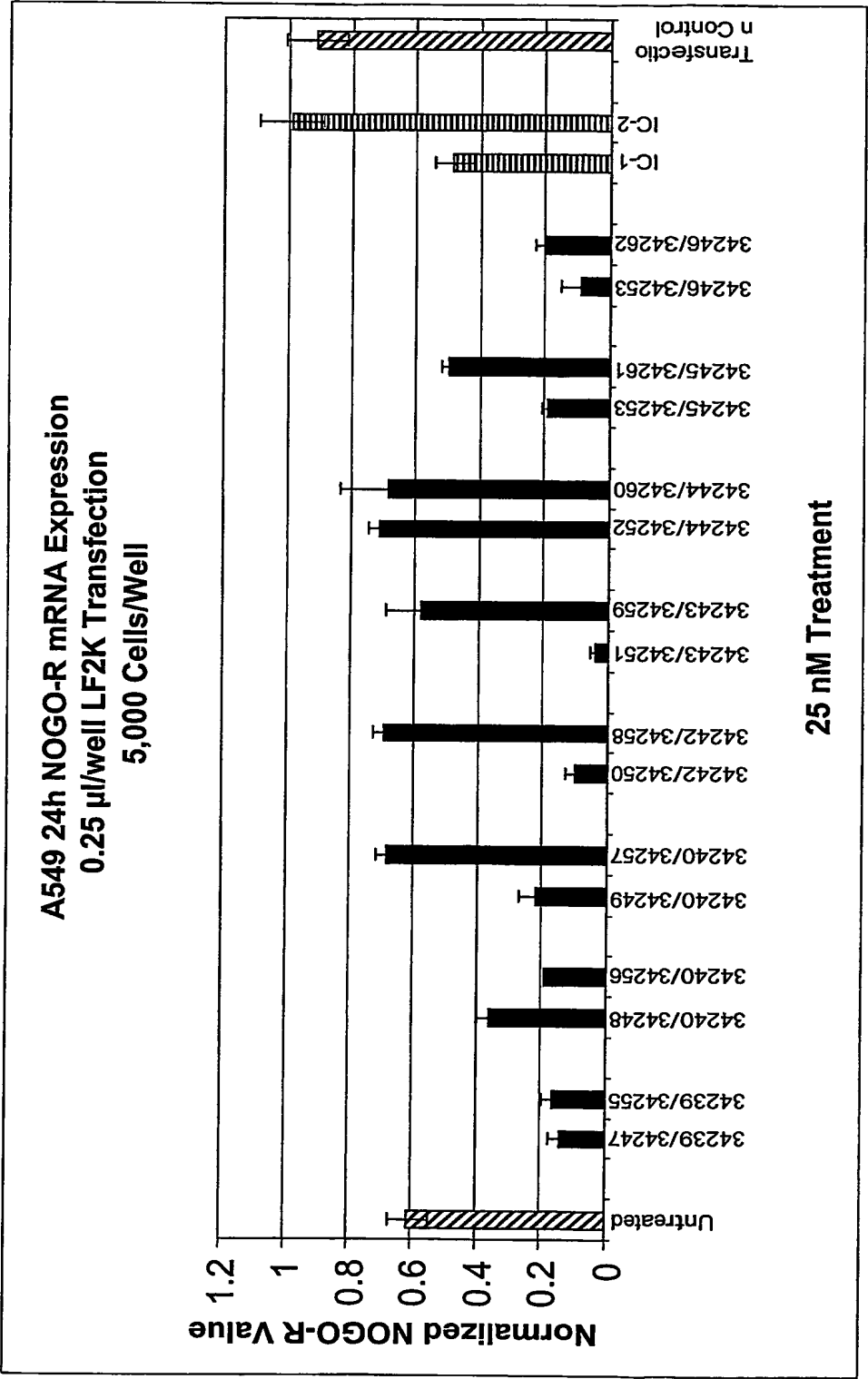




Figure 22



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